

**National Center for Biomolecular Research  
and  
Central European Institute of Technology, Masaryk University**

**NCBR Seminar – CB060**

FACULTY OF SCIENCE, MASARYK UNIVERSITY

Fall semestr 2013/2014

Teacher prof. RNDr. Vladimír Sklenář, DrSc.

**Dates and time:**

Group meetings - individual for each group, managed by group leaders, every week

**NCBR seminars room – A11, room 205, pavilion A11, 14.00**

**Special CEITEC Structural Biology seminar series – A11, room 132, 14:00**

**Chemistry seminars - pavilion A11, room 132, 14.00**

**Mendel Lectures – Mendel's Museum, Mendel Square, 17.00**

The seminar is open to all colleagues and students of Masaryk University.

19. September            Group meetings only
26. September            **Professor Jean-Louis Mergny (Special SB seminar series)**  
*University of Bordeaux, France*  
Quadruplexes are everywhere... but where exactly  
host Michaela Vorlíčková
3. October                **PhD students**  
**Martin Babinský**  
Application of NMR Spectroscopy and Molecular Modelling to Study  
(Supra-) Molecular Structure and Interactions  
**Jan Novotný**  
Biocompatible xanthine scaffold for DNA quadruplexes
10. October              **PhD students**  
**Josef Pasulka**  
Study of protein-RNA complexes by computational methods  
**Pavel Brázda**  
The Role of RNA Polymerase II Modifications in Cotranscriptional RNA Processing  
**Tomasz Kabzinski**  
Structural basis for the dual role of Nrd1 in transcription termination and RNA  
processing  
  
Mendel Lecture  
**Michael Rosbash**  
*Brandeis University, Waltham, USA*  
**Lecture cancelled**
16. October              Special lectures (optional participation) pavilion A11, room 306  
**Peter Baumann**  
*Stowers Institute for Medical Research Kansas City, USA*  
  
**10:00-12.00**  
**Nucleic Acid Research - a brief history of experiments, discoveries and  
anecdotes**  
  
**16:00-18:00**  
**Hybridization, ploidy and unisexual reproduction in vertebrates**
17. October              **Charalampos Kalodimos (Special SB seminar series)**  
*Rutgers University, USA*  
NMR of large proteins: Molecular chaperones?  
Host Kostas Tripsianes

Mendel Lecture

**Peter Baumann**

*Stowers Institute for Medical Research Kansas City, USA*

**Biogenesis and Regulation of Telomerase**

24. October

**PhD students**

**Dominika Hrošková**

By looking for U, we found the NEXT factor

**Dmytro Ustianenko**

The key players of the mammalian cytoplasmic ncRNA degradation

Mendel Lecture

**Carlos Bustamante**

*University of California, Berkeley*

Grabbing the cat by the tail: How a viral molecular motor packages DNA

31. October

**Jan Preisler**

*Professorship lecture*

**Desorption Mass Spectrometry: A Powerful Tool for Analysis of Molecules and Elements**

7. November

**Professor Dr. Walter Rossmann**

*Medical University of Vienna*

**Human mitochondrial RNase P and its multiple faces**

Host Štěpánka Vaňáčková

14. November

**PhD students**

**Jakub Štěpán**

Study of BsoBI Endonuclease by Molecular Dynamics

**Rakesh Aithal**

Role of Spo11 protein in meiotic recombination initiation

21. November

**Petr Svoboda**

*Institute of Molecular Genetics, Academy of Sciences of the Czech Republic, Prague*

The real RNAi - a Tale of Naughty Mice

Host Štěpánka Vaňáčková

Mendel Lecture

**Kay Hofmann**

*Institute for Genetics, University of Cologne, Germany*

A Common Evolutionary Basis for Cell Death Pathways in Animals, Plants and Fungi

28. November

**PhD students – Introduction of new PhD students**

Ivana Poštulková

**Martin Novák**

Structure and Interactions in Modified Quadruplex DNA

Sophia Bazzi

Lucie Slepáková

Rafael Szabla

**Miroslav Krepl**

Molecular dynamics simulations of protein/RNA complexes

**Miodrag Milovanovic**

Biosensors for characterisation of wine

5. December

**Markéta Munzarová**

*Habilitation lecture*

**Relationships between Structure and Magnetic Properties in Biomolecular, Inorganic, and Bioinorganic systems**

12. December      **PhD students – Introduction of new PhD students**  
**Milan Zachrdla**  
Structure and dynamics of subunits determining specificity of bacterial RNA polymerase  
**Eliška Šmiřáková**  
Towards deciphering the CTD code  
Petr Stadlbauer  
**Lukáš Bednařík**  
Bioinformatic analysis of the transcriptome and RNAome of eukaryotic cells  
**Tomáš Racek**  
Empirical methods for charge calculations and their parameterization  
Stanislav Geidl  
Lukáš Hanušovský  
**Pavel Janoš**  
QM/MM molecular dynamics simulations of glycosyltransferases  
Jan Oppelt
19. December      **Felix A. Rey (Special SB seminar series)**  
*Pasteur Institute, Paris, France*  
*Title to be announced*  
Host Pavel Plevka